# BD MicroProbe™ Processor

# Instrument User's Manual

(For use with BD Affirm™ VPIII Microbial Identification Test)

BD

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# System Software Notice

This manual includes instructions for installing and operating the BD MicroProbe™ Processor as it is used with the BD Affirm™ VPIII Microbial Identification Test kits. Each Affirm Microbial Identification Test requires specific system software to be installed in the Processor. Please refer to the test kit package insert for the correct software version and the specific test procedures.

# Change History

| REVISION | DATE | PAGES | REASON |
|---|---|---|---|
| New | 1/99 | All | New Product Release |
| A | 4/99 | All | CE Marking |
| B | 7/99 | 1, 2, 50, 52 | Codification |
| C | 1003 | All | CE Marking |
| D | 2010/10 | All | Update Format, Photos and AR Address Change. Update ambient operating temperature in Section 2.2.1. Update unpacking instructions in Section 2.3.1. |

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# Bibliography

Disinfecting Agents recommended in CLSI document M29-A3, 2005; Approved Guideline: Protection of Laboratory Workers from Occupationally Acquired Infections.

# 1 Introduction

## 1.1 General

This section provides introductory information on the BD MicroProbe Processor. The following major topics are included:


Intended Use of the Processor ..... Section 1.2
Description and Principles of Operation..... Section 1.3
System Components..... Section 1.4
Use of this Manual ..... Section 1.5
Notes, Cautions and Warnings..... Section 1.6
Summary of Cautions and Warnings ..... Section 1.7


## 1.2 Intended Use of the Processor

The BD MicroProbe Processor is used in the Automated Processing portion of the Affirm Microbial Identification Test procedure. The BD MicroProbe Processor is required for ALL Affirm tests and, together, they work as a SYSTEM. This User's Manual describes the installation and operation of the Processor only. Refer to your Affirm Test kit package insert to perform the test.

If the processor is used in a manner not specified, the protection afforded by the processor may be impaired.

The BD MicroProbe Processor is pictured below. Individual components are listed below.

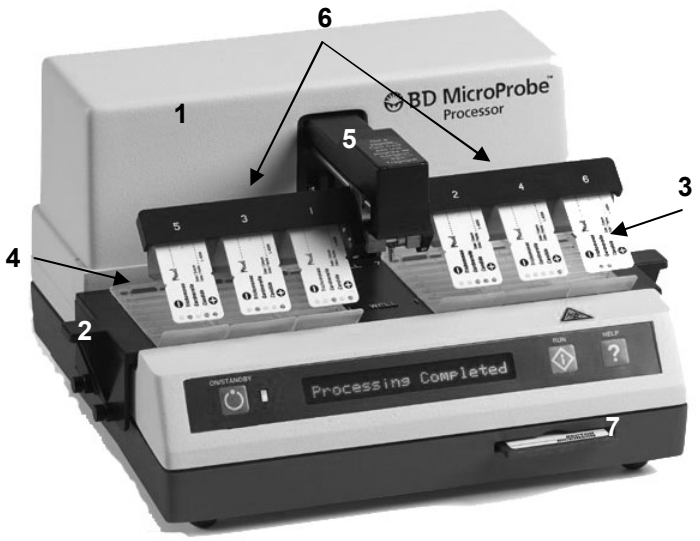


Figure 1-1 The BD MicroProbe Processor

## The BD MicroProbe Processor Components

1. BD MicroProbe Processor Base Unit
2. Cassette Caddy
3. Probe Analysis Cards (PACs)
4. Reagent Cassettes
5. Robotic Arm
6. PAC Arms
7. Program Card

## 1.3 Description and Principles of Operation

The BD MicroProbe Processor is a compact, robotic unit that automatically controls the reagent and sample mixing, and incubation timing of the Affirm Microbial Identification Tests. The Affirm tests use specialized beads coated with microbe-specific DNA probes to qualitatively identify the presence of selected target microorganisms in clinical samples.

Each test consists of a panel of organism-specific probe beads, plus a specificity control (negative) bead and a procedural control (positive) bead. The beads are all located on a single test card called a Probe Analysis Card (PAC). The identification reaction takes place on the beads as the processor moves the PACs through a series of incubations with sample and reagent, resulting in a blue-colored bead if the test is positive.

The BD MicroProbe Processor consists of a base unit with removable tray, called the cassette caddy, which holds from one to six reagent cassettes. The PAC arms on the robotic arm pick up the PACs and move them through a series of reagents in reaction wells in the reagent cassettes. The precise timing of incubations in the reaction wells is under software control as the PACs are automatically cycled, first into the sample well, then through the reagent wells. Depending on the test, the reaction is complete in approximately 30 minutes.

The BD MicroProbe Processor is very simple to operate. Once started, the system automatically completes the test procedures without any further operator attention. A [HELP] mode is available to assist new or infrequent users. The system software is on a program card selected to match the specific test.

# 1.4 System Components

## 1.4.1 BD MicroProbe Processor

BD MicroProbe Processor Base Unit
Cassette Caddy
Power Transformer (selectable for voltage)
User's Manual

## 1.4.2 Program Card

The test-specific program card must be matched to the test. Your Processor will initially arrive with a program card included. Please confirm that you have the correct software for the test you wish to run.

## 1.4.3 Affirm Microbial Identification Test Kits

Each Kit contains:

- Reagent Cassettes
- PACs (Probe Analysis Cards)
- Reagent Bottles
- Miscellaneous sample collection and processing supplies for the particular assay

## 1.4.4 Affirm Sample Collection Kits

Specimen collection materials, such as swabs or aspiration tubes, are packaged for user convenience in the test kits or in separate sample collection kits.

## 1.4.5 Lysis Block

A heating block (Lysis Block) with thermometer is supplied.

# 1.5 Use of this Manual

This user's manual is designed as a reference tool for technologists, supervisors and other personnel who operate and maintain the BD MicroProbe Processor on a regular basis.

Every attempt has been made to include information which would be required during normal use and maintenance of the instrument. Should a question arise which is not answered in this manual, please contact the following parties (USA):

For assistance in North America:

☎ Technical Services 1-800-638-8663

International contacts are listed in Appendix C, or contact your local BD representative.

## 1.6 Notes, Cautions and Warnings

Throughout this manual, important information is presented in boxes offset from the regular text, and is labeled as either a NOTE, CAUTION or WARNING. These messages are formatted as shown below and bear the following significance:

NOTE
Important information about instrument use worthy of special attention is presented as a NOTE.

**CAUTION**
**Information on an activity which potentially could cause damage to the instrument is presented as a CAUTION.**

**WARNING**
**INFORMATION ON AN ACTIVITY WHICH POTENTIALLY COULD CAUSE INJURY TO THE USER IS PRESENTED AS A WARNING.**

## 1.7 Summary of Cautions and Warnings

- Do not use the robotic arm as a handle to lift or move the processor. Always lift from the bottom of the base unit.
- To raise the robotic arm, grasp it near the PAC arms and move it upward using even but firm pressure. Do not use the PAC arms to raise the robotic arm.
- The power plug on the transformer must be connected to a grounded power source. Do NOT use an adapter to connect the power plug to an outlet for which it is not designed.
- Position the instrument in a place where the program card port on the front of the instrument is protected from dirt or liquids. If spillage occurs, contact your Technical Services representative before using the processor or installing the program card.
- Handle the program cards carefully to prevent damage. Store the card in the plastic case when not installed in the instrument.
- The robotic arm automatically rises when the power is turned ON and drops when the power is set to STANDBY. Keep hands and other objects clear of the arms when turning power ON or setting to STANDBY.
- Do not add or remove reagent cassettes, or attempt to install or remove the cassette caddy when the processor is in operation ("homing" or processing PACs).
- The BD MicroProbe Processor contains no user serviceable parts. All maintenance and repair other than the procedures described in Section 4 – Maintenance must be performed by BD qualified service personnel.

- Always set the Processor to STANDBY and disconnect the power supply before performing cleaning, disinfection or maintenance procedures.
- Do not use organic solvents such as acetone or petroleum based products to clean the painted plastic instrument case. Do not use bleach on or near metal components.
- Do not store reagents on the instrument. Wipe all reagent spills immediately.
- Do not immerse the BD MicroProbe Processor or power transformer in liquid.
- Make certain the 10 percent bleach solution does not come into contact with the program card.

# 2 Installation

## 2.1 General

This section provides specifications for installation and setup of the BD MicroProbe Processor. The following major topics are included:


Instrument Specifications ..... Section 2.2
Instrument Installation..... Section 2.3
Powering On and Off the Instrument ..... Section 2.4
Repacking ..... Section 2.5


## 2.2 Instrument Specifications

### 2.2.1 Operating Specifications

#### Dimensions

Height: 6 in/16 cm

Width: 10 in/26 cm

Depth: 9 in/24 cm

Weight: 18 lbs/8 kg

### Power

Voltage: Selectable by Transformer
120 VAC ± 10%; 220/240 VAC; 100 VAC ± 10%

50/60 Hz (± 10%)

Maximum Input Current: <1 A

### Environmental

**Indoor Use**

Ambient Temperature: 22 – 28°C

Ambient Humidity: 10 – 85%

Altitude: 2000 m maximum

Installation Category II, Pollution Degree 2 as per IEC 664

### Regulatory Compliance

Designed to meet UL, CSA and IEC standards.

### 2.2.2 Calibration

The BD MicroProbe Processor is factory calibrated. No further calibration or alignment is required under conditions of normal use.

## 2.3 Instrument Installation

### 2.3.1 Unpacking the Processor

1. Place the shipping container in the upright position. Open the top of the container and remove the product literature and the top foam packing block.
2. Remove the accessories: The power transformer (120 V or 220/240 V or 100 V), lysis block, thermometer, program card and cassette caddy.

3. Carefully lift the processor in the protective bag out of the box and place it on a level surface.

4. Remove the clear plastic bag, then remove the protective foam insert covering the robotic arm.

**CAUTION**
**Do not use the robotic arm as a handle to lift or move the processor. Always lift from the bottom of the base unit.**

5. Remove the power transformer, program card and cassette caddy and make certain the program card matches the Affirm test you intend to use.

NOTE
Retain the BD MicroProbe Processor shipping container and all packing materials for later transport or shipment.

6. To complete the installation, verify that all parts are present (see steps 1 – 5 above and Figure 2-1) and inspect for any damage.

   If any parts are missing or damaged contact BD:

   ☎ Technical Services 1-800-638-8663

   or your local BD representative.

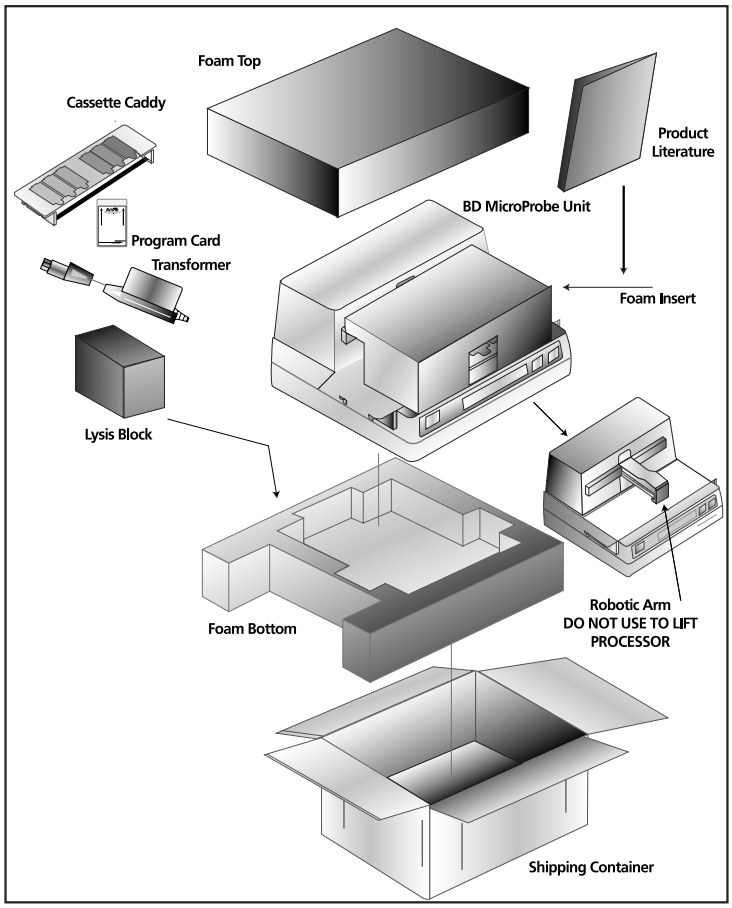


Figure 2-1 Unpacking the Processor

| NOTE |
| --- |
| The plastic bag that covers the instrument is not pictured here. |

### 2.3.2 Setting Up the Processor

**CAUTION**
**To raise the robotic arm, grasp it near the PAC arms and move it upward using even but firm pressure. Do not use the PAC arms to raise the robotic arm.**

1. Place the processor on a clean, level surface away from liquids or mechanical equipment that may interfere with the operation of the instrument.
2. Gently raise the robotic arm to install the cassette caddy. Rest the caddy on the locator pins on each side of the instrument, level with the surface of the base unit.

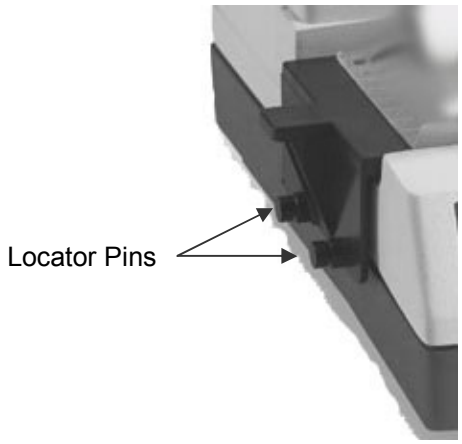


Figure 2-2 Setting up the Processor

### 2.3.3 Installing the Transformer

**WARNING**
**THE POWER PLUG ON THE TRANSFORMER MUST BE CONNECTED TO A GROUNDED POWER SOURCE. DO NOT USE AN ADAPTER TO CONNECT THE POWER PLUG TO AN OUTLET FOR WHICH IT IS NOT DESIGNED.**

**DO NOT, UNDER ANY CIRCUMSTANCES, OPERATE THE SYSTEM UNTIL AN ELECTRICAL GROUND IS PROVIDED, AND THE POWER CORD IS PROPERLY CONNECTED TO GROUND.**

Insert the transformer pin connector into the keyed port on the back of the processor, aligning the notch on the connector to the key at the top of the port. Then insert the end of the power cord into an outlet of appropriate voltage.

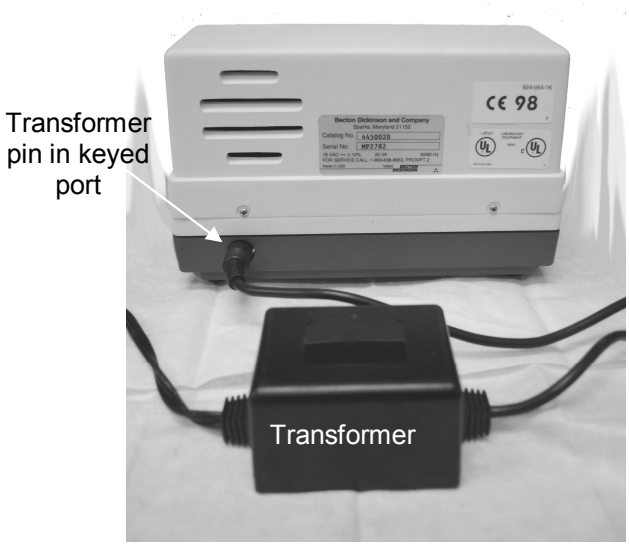


Figure 2-3 Installing the Transformer (Rear View of the Processor)

## Installing the Program Card

**CAUTION**
**Position the instrument in a place where the program card port on the front of the instrument is protected from dirt or liquids. If spillage occurs, contact your Technical Services representative before using the processor or installing the program card.**

**CAUTION**
**Handle the program cards carefully to prevent damage. Store the card in the plastic case when not installed in the instrument.**

The program card contains the specific processor operating software for a particular Affirm test. Confirm that the description on the card matches that on the Affirm test kit package insert.

1. Make sure the system is set to STANDBY (the green LED is NOT lit). If ON, press the [ON/STANDBY] key to set the Processor to STANDBY.

NOTE
Do not insert or remove the program card while the processor is turned ON or in operation.

2. With the label up, insert the card in the direction of the arrows into the program card port on the lower right front of the instrument. **You will feel the card seat firmly in the port when it is properly installed.**

Figure 2-4 Installing the Program Card

## 2.4 Powering On and Off the Instrument

**WARNING**
**THE ROBOTIC ARM AUTOMATICALLY RISES WHEN THE POWER IS TURNED ON AND DROPS WHEN THE POWER IS SET TO STANDBY. KEEP HANDS AND OTHER OBJECTS CLEAR OF THE ARMS WHEN TURNING POWER ON OR SETTING TO STANDBY.**

### 2.4.1 Power On

When the unit is connected to the transformer and the power outlet, press the red [ON/STANDBY] key on the front left side of the control panel. The green LED on the panel will light and will remain lit whenever the power to the system is ON. When a program card is installed, the user prompts will appear on the display. A program card must be in place to light the display.

### 2.4.2 Power Standby

The processor may be set to STANDBY by pressing the red [ON/STANDBY] key on the control panel. The green LED is not illuminated when the power is set to STANDBY. It is recommended that the instrument be set to STANDBY if it will be idle for more than 24 hours.

| NOTE |
| --- |
| The robotic arm will drop when the power is set to STANDBY. Lift the robotic arm to install or remove the cassette caddy when the power is set to STANDBY. |

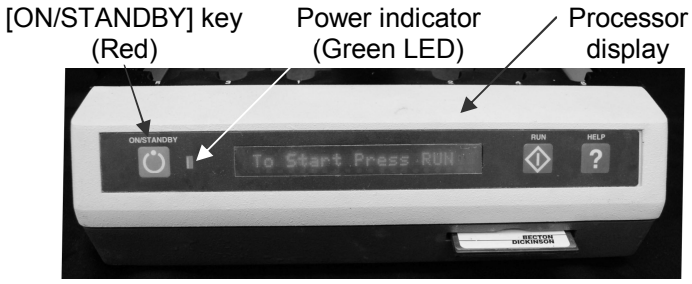


Figure 2-5 Powering Up the Processor

### 2.4.3 Shut-down Procedure (Preparation for Storage or Shipping)

1. Remove any reagent cassettes or PACs from the instrument. Remove the caddy and store it in the original shipping box.
2. Make sure the system is in the "home" position with the PAC arms to the rear. The processor will go to the "home" position when the instrument is first turned ON and prepared to run a test, or when the [RUN] key is pressed at the end of an assay.

3. Press the [ON/STANDBY] key on the control panel. The green LED will go out, and the display will become dark. Disconnect the electrical plug from the power outlet and the transformer pin connector from the processor.
4. Carefully remove the program card from the port on the front of the instrument and place it in the plastic storage box.
5. The system may be stored covered or repacked for shipment.
6. Prior to shipping, use the disinfecting procedure in Section 4.4.

## 2.5 Repacking the Processor

1. Check that you have completed the shut-down procedure before repacking the processor.
2. Retrieve the original shipping box and packing material. This is very important as the custom packaging foam supports the Processor components in the proper position during shipment.
3. Place the shipping box on a level surface with only the bottom packing foam in place. All other pieces of foam must be removed.
4. With the instrument in the "home" position (PAC arms to the rear), carefully position the protective foam insert to cover the robotic arm.
5. Place the processor into the protective plastic bag and carefully lower it into the foam support in the box, supporting the unit at the bottom, if necessary. DO NOT use the robotic arm as a handle.

6. Place all accessories into the shipping box. Cover with top foam piece. See Figure 2-1 for placement of packing materials.
7. Close the box and seal with shipping tape.

## 3.1 General

This section describes the routine operation of the MicroProbe Processor. The following major topics are discussed:

Processor Components and Functions..... Section 3.2
User Control Panel Functions ..... Section 3.3
User Prompts and Responses ..... Section 3.4
Setting Up and Processing Samples ..... Section 3.5

## 3.2 Processor Components and Functions

### 3.2.1 Processor Base Unit

The base unit houses the mechanical and electronic components, positions the cassette caddy, and provides a port for inserting the system software (program card).

### 3.2.2 Robotic Arm and PAC Arms

The only moving parts on the processor, the robotic arm and the PAC arms, work together to pick up the PACs (Probe Analysis Cards, supplied in the Affirm VPIII test kits) at the start of the run and move them through the reagent wells,

presenting them to the operator when processing is completed.

The robotic arm supports and positions the PAC arms, and controls the up and down motion of the PACs in the reagent cassettes. When the power is ON, the robotic arm is always raised up, and drops when the power is set to STANDBY. This arm should not be used to lift the processor, but it can be raised gently to install the caddy when the power is set to STANDBY.

The PAC Arms (right and left) move forward and back, carrying the PACs through the cassette wells. The PAC arms are carefully aligned to the reagent cassette wells. Care must be taken not to bump or manipulate these arms in a way that may cause them to become misaligned.

### 3.2.3 Cassette Caddy

The cassette caddy is the tray that holds the reagent cassettes during processing. The caddy is easily removed for set-up and transport of multiple reagent cassettes. When the caddy is installed, it rests in the caddy bay on the locator pins at each side, level with the surface of the base unit.

**CAUTION**
**Do not add or remove reagent cassettes, or attempt to install or remove the cassette caddy when the processor is in operation ("homing" or processing PACs).**

### 3.2.4 Program Card

The Affirm program card functions in a manner similar to a computer floppy disc, supplying the operating software for a particular application. Program cards are assay specific.

### 3.2.5 Program Card Port

The program card is inserted into this specialized port, which is the horizontal slot located on the lower right front of

the instrument. The instrument must be set to STANDBY (green LED NOT lit) when the card is inserted or removed to avoid damage to the program card.

### 3.2.5 User Control Panel

Includes the [ON/STANDBY], [RUN] and [HELP] keys; 20-character vacuum fluorescent display; and LED power indicator.

## 3.3 User Control Panel Functions

### 3.3.1 [ON/STANDBY] Key

Pressing the red [ON/STANDBY] key allows the system to be powered up (ON) or set to STANDBY from the control panel. The green LED is illuminated only when the system is ON. Always install the program card before turning the instrument power to ON. If the green LED is lighted and a card is not installed, set the system to STANDBY before installing the card.

### 3.3.2 [RUN] Key

Pressing the green [RUN] key causes the system display to prompt the user to complete the next step in the test sequence and also starts the automatic processing cycle. The [RUN] key is used to exit the [HELP] mode when the operator is ready to continue. The blinking double arrow (>>) on the display always prompts the operator to press [RUN] to continue.

### 3.3.3 [HELP] Key

Pressing the blue [HELP] key causes the system to display more information about the prompt on the display. [HELP] is available to the operator any time before the start of automated processing. To exit the [HELP] mode, simply press [RUN] to continue.

### 3.3.4 Power Indicator

The green light (LED) next to the [ON/STANDBY] key is illuminated when the BD MicroProbe Processor is powered up and ON (the transformer is connected to processor unit and plugged into the power supply; the [ON/STANDBY] key has been pressed to the ON position). The green LED is not lighted when the system is set to STANDBY.

### 3.3.5 Display

The lighted display prompts the operator during test setup and provides test status messages during operation. Displaying up to 20 characters at a time, the vacuum fluorescent display will wrap around and repeat messages until the operator presses the [RUN] key or presses the [HELP] key. The display is only lighted or active when the system is ON and a program card is installed.

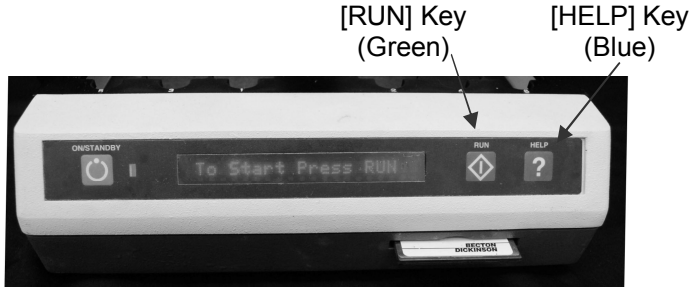


Figure 3-1 User Control Panel: Controls and Indicators

## 3.4 User Prompts and Responses

The BD MicroProbe Processor is designed to be easy to use by both new and experienced operators. A series of prompts on the display guides the user through the various set-up steps in the test.

A [HELP] mode is available for new or infrequent users. (See Section 3.3.3.) The [HELP] prompts can be accessed any time before the start of automated processing by pressing the blue [HELP] key. Pressing the green [RUN] key will exit [HELP] and continue to the next step. In all instances, the appearance of a blinking double arrow (>>) on the display tells the user to "press the [RUN] key."

While each test uses test-specific software, all BD MicroProbe Processor software follows the same general operating principles. Examples are given below. Please refer to the user instructions packaged with each test kit for the specific prompts and procedures.

| DISPLAY | OPERATOR ACTION |
|---|---|
| PLEASE WAIT… | Wait until the next prompt appears on the display. The instrument may be moving or "homing" during this time. |
| ADD SUBSTRATE >> | Add reagent as called out in the test kit package insert. Press the [RUN] key when the reagent addition is complete. The [HELP] mode contains additional information. Press [RUN] to exit [HELP] and continue with the assay steps. |
| ADD SAMPLE >> | Using the test kit to prepare the sample, place the prepared sample into well 1 of the reagent cassette. |
| PLACE CADDY | Replace the caddy onto the processor, taking care not to splash the reagents or samples. **Ensure that the caddy is placed securely on all four locator pins.** |
| PLACE PAC >> | Open one PAC for each sample being run and place it in Well 1 with the beads in the solution and the microorganism names facing forward. |
| TO START PRESS [RUN] >> | Press the [RUN] button to start automated processing. |

The prompts will continue to direct the operator through the assay procedure with [HELP] available at each step until automated processing starts. When automated processing is complete, the system will present the PACs to the operator.

| NOTE |
| --- |
| Always remove the completed PACs when they are presented, and be sure PACs are removed before pressing the [RUN] key. |

# 3.5 Setting Up and Processing Samples

The following general tips are intended to help all BD MicroProbe Processor users. Each Affirm Microbial Identification Test has specific sample preparation requirements and procedures. Please refer to the package insert packaged in each test kit before processing samples.

## 3.5.1 Using the Cassette Caddy

The cassette caddy is designed to be a workstation for setting up Affirm tests. It is easier to add substrate solution and prepared samples while the caddy is off the processor. When power is set to STANDBY, lift the robotic arm gently and slide the caddy out. When the power is ON, the arm remains in a raised position so the caddy can be easily moved on and off the processor. Care should be taken not to bump the caddy when it is being installed with open cassettes and samples, to avoid splash-over between wells. When replacing the caddy onto the processor, be sure that it is securely positioned on all four locator pins.

## 3.5.2 Positioning the Cassettes for Processing

When less than six samples are processed, position the reagent cassettes closest to the center first, and then distribute evenly on each side, moving from the center outward. The PAC arms on the processor will move each

PAC into the proper position when it is picked up. As a double check, observe the PACs at the start of processing to make sure they are parallel with the cassette wells and at even height along the bottom.

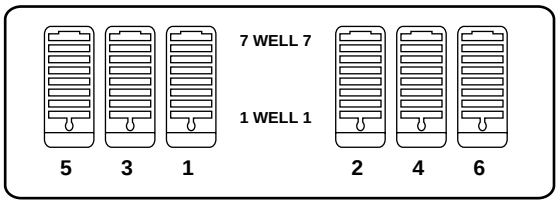


Figure 3-2 Cassette Positions

### 3.5.3 Cassette Positions

Although the PACs should not be manipulated during operation, small adjustments can be made if done very carefully. If one or more PACs are significantly out of position at the start of a run, you may stop the run and restart as follows: support the arm while setting the power to STANDBY. Release the PACs into well 1 and lift the robotic arm to remove the caddy from the processor. Check that nothing has fallen into any of the wells in the reagent cassettes. Turn the power ON, wait for the arm to “home,” and begin the run again.

### 3.5.4 Turning the Processor Off

Always remove any PACs and cassettes and press [RUN] before turning the processor power OFF so that the PAC arms can return to the "home" position. If the caddy will be stored off the processor, it is easier to remove it before setting the instrument power to STANDBY.

# 4 Maintenance

## 4.1 General

The BD MicroProbe Processor requires little cleaning and maintenance from the user to provide reliable performance. Procedures are described in this section:


Cleaning and Maintenance ..... Section 4.2
General Cleaning..... Section 4.3
Disinfection/Decontamination..... Section 4.4


**WARNING**
**THE BD MICROPROBE PROCESSOR CONTAINS NO USER SERVICEABLE PARTS. ALL MAINTENANCE AND REPAIR, OTHER THAN THE PROCEDURES DESCRIBED IN SECTION 4—MAINTENANCE, MUST BE PERFORMED BY BD QUALIFIED SERVICE PERSONNEL.**

**WARNING**
**ALWAYS SET THE PROCESSOR TO STANDBY AND DISCONNECT THE POWER SUPPLY BEFORE PERFORMING CLEANING, DISINFECTION OR MAINTENANCE PROCEDURES.**

## 4.2 Cleaning and Maintenance

No special maintenance procedures are required other than wiping reagent spills and periodic surface cleaning to remove any dirt or grime. Because of the possibility of blue-colored reagent deposits as a result of reagent reactions, spills and splatters should be wiped up immediately to prevent staining. Use the following cleaning procedures with the BD MicroProbe Processor on an as-needed basis, for general cleaning or to remove clean liquid spills. Good laboratory practice calls for treating any specimen spill as a potential biohazard. Therefore, use the procedure for disinfection if contamination is suspected.

**CAUTION**
**Do not use organic solvents such as acetone or petroleum based products to clean the painted plastic instrument case. Do not use bleach on or near metal components.**

**CAUTION**
**Do not store reagents on the instrument. Wipe all reagent spills immediately.**

**CAUTION**
**Do not immerse the BD MicroProbe Processor or power transformer in liquid.**

## 4.3 General Cleaning

The BD MicroProbe Processor base unit and reagent caddy should be cleaned periodically with a detergent to keep the surfaces clean. Make sure the unit is set to STANDBY and disconnected from the power supply while cleaning.

Wipe all surfaces with a mild detergent, and then wipe with a moist cloth to remove any residual detergent. Finally, wipe the

surfaces with 70% isopropyl alcohol and allow to air dry. Cleaning monthly should be sufficient for most laboratories, however more frequent cleaning will not harm the system.

The program card may be wiped carefully with 70% isopropyl alcohol and allowed to air dry. Storing the card in the protective plastic cover when not in use will prevent exposure to dirt and spills.

# 4.4 Disinfection/Decontamination

## 4.4.1 BD MicroProbe Processor Base Unit

1. Set the unit to STANDBY and disconnect the power. Immediately remove the spilled material by wiping with a soft, absorbent cloth or paper and dispose in a biohazard container.
2. Wipe down all contaminated surfaces with a germicidal detergent* and wipe with a moist cloth to remove all organic material.

   *Germicidal detergents are listed in CLSI M29-A3, 2005; Approved Guideline: Protection of Laboratory Workers from Occupationally Acquired Infections.
3. Wipe all surfaces with a 10 % bleach solution and allow to air dry.

**CAUTION**
**Make certain the 10 % bleach solution does not come into contact with the program card.**

If you suspect any liquid material has spilled onto the program card or into the program card port, contact BD Technical Services or an authorized distributor for assistance. Do NOT use the system if such a spill is suspected.

4. After the disinfection time is complete, wipe the processor thoroughly with a moist cloth to remove the residual disinfectant.
5. Finally, wipe the surfaces with 70% isopropyl alcohol and allow to air dry.

| NOTE |
| --- |
| This procedure must be followed prior to shipping the unit back to BD for repair. |

### 4.4.2 Cassette Caddy

The cassette caddy may be disinfected, using the same procedure as the processor base unit (steps 1 through 5 above).

### 4.4.3 Program Card

Disinfect the program card using the same procedure as the processor base unit steps 1 through 5 above. DO NOT GET THE ELECTRICAL CONTACTS INSIDE THE PROGRAM CARD WET. Allow the surface of the program card to dry thoroughly before installing the card in the base unit.

# 5 Troubleshooting

## 5.1 General

This troubleshooting guide describes the symptoms, possible causes, and corrective actions that an operator should take in case of a problem. These are listed in order from the most simple problem to the most complex. Please follow directions carefully, and note the result of any corrective actions which have been attempted in case telephone assistance is required. If none of the recommended corrective actions are successful, contact your BD Technical Services representative or authorized distributor for assistance.

Please have available your processor serial number and type of software being used when calling for assistance.

**SYMPTOM: NO POWER TO UNIT**

Instrument does not respond to pressing the [ON/STANDBY] key (green LED does not light).

**Possible Cause:**
Unit not receiving power.

**Corrective Action:**
Check that the transformer is connected to the instrument. Make sure the connection is firm.

Check that the transformer is connected to a live wall outlet or power strip. If a power strip is used, make sure it is ON.

Press the [ON/STANDBY] key to continue operation. If the unit still will not operate, call for assistance.

**SYMPTOM: UNIT WILL NOT OPERATE**

Instrument display does not light, and the robotic arm does not move. Green LED light indicates power is ON.

**Possible Cause:**
Program card not installed, or program card not seated properly.

**Corrective Action:**
Set the system to STANDBY by pressing the [ON/STANDBY] key.

Check to see that a program card is installed in the port on the front of the unit. If not, install the card.

If program card is in place, set the power to STANDBY and carefully reseat the program card until it "clicks" into the port.

Press the [ON/STANDBY] key to continue operation. If the unit still will not operate, call for assistance.

**SYMPTOM: UNIT WILL NOT RESPOND**

The display is locked on a prompt, or the unit does not respond to pressing the [RUN] or [HELP] key during test set-up.

**Possible Cause:**
Power surge or interruption or a system problem. A system reset is required.

**Corrective Action:**
Press the [ON/STANDBY] key to reset the system and continue with test setup.

If resetting the system does not cause the processor to operate correctly, contact your BD Technical Services representative for assistance.

**SYMPTOM: UNIT STOPS PROCESSING IN MID-CYCLE**

Instrument stops processing PACs mid-cycle (wells 2 to 7) and the alarm beeps.

**Possible Cause:**
Power surge or interruption or system problem.

**Corrective Action:**
If the PAC is in wells 2 to 7:

- Support the robotic transport arm to keep it from dropping and set the system to STANDBY.
- Lift the robotic arm and carefully remove the PACs from the PAC arms. Discard the PACs.
- Carefully retrieve ALL of the sample from each well 1 with a disposable pipette and place the samples into well 1 of a new reagent cassette.
- Discard the partially processed reagent cassettes and place the new cassettes into the caddy on the instrument.
- Process the sample with new PACs after adding substrate to well 7 of the new reagent cassettes.

**SYMPTOM: UNIT STOPS PROCESSING AT START OF RUN**

Instrument stops processing at the start of a run (well 1) and the alarm beeps.

**Possible Cause:**
Power surge or interruption or system problem.

**Corrective Action:**
If the PAC is still in well 1 (sample well):

- Support the robotic arm to keep it from dropping and set the instrument to STANDBY.

- Release the PACs from the clips into reagent cassette well 1.
- Lift the robotic arm and remove the caddy with the PACs in the cassettes.
- Turn the instrument ON to reset and wait for it to "home".
- Place the caddy with PACs positioned in the reagent cassettes on the processor.
- Move through the prompts to start automated processing.

# Limited Warranty

This warranty gives you specific legal rights. Additionally, you may have other rights that vary from state to state and country to country.

The BD MicroProbe Processor is warranted to be free of defects in material and workmanship. Full responsibility is assumed by the manufacturer for servicing any instrument or its components, which under normal operating conditions, prove to be defective within one year of delivery.

BD will furnish new or remanufactured components upon its option. All replacements shall meet new part specifications. Defective components become the property of BD.

It is understood that the equipment covered by this agreement has been installed in accordance with the recommendations and instructions in the BD MicroProbe Processor User's Manual.

Any damage to the BD MicroProbe Processor resulting from the negligence of the owner or operator to maintain reasonable care and precautions in the operation and maintenance of the system will void this warranty and terminate the obligations of the manufacturer as stated herein.

This warranty is in lieu of all other warranties, whether express or implied, including but not limited to warranties of merchantability or fitness for a particular use. In no event will BD be liable for indirect or consequential damages.

# Service

The BD MicroProbe Processor is not designed to be repaired by the user. Any service or repair work must be done by BD authorized service personnel only. Contact your BD Technical Services representative or authorized distributor if you believe your Processor requires service or repair.

# B Replacement Parts

## Ordering Information

To order additional accessories or replacement parts, contact your BD Affirm VPIII Microbial Identification Test distributor representative.

Affirm Microbial Identification Test Kits and Sample Collection Sets may be ordered through your BD Affirm VPIII Microbial Identification Test distributor representative:

## Replacement Items

| | |
|---|---|
| 211901 | Sterile Affirm thermometer |
| 212992 | Replacement kit PAC clips – individual clips x 6 |
| 441864 | Replacement kit PAC clips – single bar |

# International Contacts

| | |
|---|---|
| **Becton, Dickinson and Company**<br>7 Loveton Circle<br>Sparks, MD 21152<br>Tel: 1-800-638-8663<br>www.bd.com/ds | Rineanna House<br>Shannon Free Zone<br>Shannon, County Claire, Ireland<br>Tel: 353-61-47-29-20<br>Fax: 353-61-47-29-07 |
| 2771 Bristol Circle<br>Oakville, Ontario<br>Canada L6H 6R5<br>Voice: (905) 855-5550<br>800-268-5430 | 30 Tuas Avenue 2<br>Singapore 639461<br>Tel: 65-8610633<br>Fax: 65-8601590 |
| Rua Alexandre Dumas 1976<br>04717-004 Sao Paulo, S.P Brazil<br>Tel: 55-11 5459833<br>Fax: 55-11 2478644 | Monte Pelvoux 111<br>9th Floor<br>Col. Lomas de Chapultepec<br>11000 Mexico, D.F.<br>Tel: 52-5 237 1200<br>Fax: 52-5 237 1287 |
| Akasaka D S Bldg.<br>5-26 Akasaka 8-chome<br>Minato-ku<br>Tokyo, 107 Japan<br>Tel: 81-3-54138181<br>Fax: 81-3-5418144 | |

# BD MicroProbe™ Processor

## Instrument User's Manual

(For use with BD Affirm™ VPIII Microbial Identification Test)

BD

# Printing Specifications
# DO NOT PRINT THIS PAGE
(As per Vendor Specification VS0208)

Internal Pages
Paper: 50lb White Offset, 5 ½" x 8 ½"
Black ink both sides

Front and Back Cover
Paper: 100lb White Card Stock 5 ½" x 8 ½ "
Outside surfaces to be dull coated
Artwork:
Front Cover: use artwork on Section 10 page 1
Back Cover:blank

Binding
GBC Punch Comb, 3/8" White